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S P E C I F I C A T I O N

OF

JAMES MURDOCH.

CAPSULES FOR PROTECTING MEDICINAL
AND OTHER PREPARATIONS.

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**Capsules for Protecting Medicinal and other
Preparations.**

MURDOCH'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, JAMES MURDOCH, of Staple Inn, in the County of Middlesex, Patent Agent, send greeting.

WHEREAS Her present most Excellent Majesty Queen Victoria, by Her
5 Royal Letters Patent under the Great Seal of the United Kingdom of Great Britain and Ireland, bearing date at Westminster, the Second day of November, One thousand eight hundred and forty-seven, in the Eleventh year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said James Murdoch, my exors, admors, and assigns, Her especial licence, full power,
10 sole privilege and authority, that I, the said James Murdoch, my exors, admors, and assigns, and such others as I, the said James Murdoch, my exors, admors, or assigns, should at any time agree with, and no others, from time to time and at all times during the term of years therein expressed, should and lawfully might make, use, exercise, and vend, within
15 England, Wales, and the Town of Berwick-upon-Tweed, the Invention of
“AN IMPROVED CAPSULE OR SMALL CASE FOR PROTECTING MATTERS ENCLOSED THEREIN FROM THE ACTION OF THE AIR, AND AN IMPROVED MATERIAL TO BE USED IN THE MANUFACTURE OF THE SAID CAPSULES,” communicated to me from abroad; in which said Letters Patent is contained a proviso that I, the said
20 James Murdoch, should cause a particular description of the nature of the said Invention, and in what manner the same is to be performed, by an instrument in writing under my hand and seal, to be inrolled in Her Majesty's High Court of Chancery within six calendar months next and immediately after the date of the said in part recited Letters Patent, as
25 in and by the same, reference being thereunto had, will more fully and at large appear.

Murdoch's Improved Capsule for Protecting Matters from the Action of the Air.

NOW KNOW YE, that in compliance with the said proviso, I have ascertained and set forth the nature of the said Invention, and the manner of carrying it into effect, in and by the following description thereof:—

The improved capsule which forms the subject of the present Invention, and which is adapted to contain medicinal preparations, confections, and various 5 other substances, solid, liquid, or in powder, admits of the substances being easily introduced into or withdrawn from it as required, and becomes hermetically sealed by slightly wetting the edges which lap one over the other. For this purpose the capsule is formed of two similar parts or capsules, the one shutting into the other, the one constituting the case or recipient, and the 10 other the lid or cover, the diameter of the latter slightly exceeding that of the former, so that the cover may fit tightly over the case. The form of the capsule may be varied to suit particular purposes, but the most generally preferable form for the case and the cover is that of a cylinder, with a hemispherical end, the two, when combined, resembling nearly in form the cocoon of 15 a silkworm. The improved capsules are (preferably) made as follows:—Pairs of polished metallic rods of form and dimension corresponding to the form and size of the case and cover respectively are suspended from rods, and dipped to the required depth into a solution of gelatine or other semiliquid or viscous material of which the capsules are to be composed, and then withdrawn; a 20 portion of the exterior of the rods becomes thereby coated with a film of the material, which when it becomes dry is removed from the rod. In order to detach the capsules from the rods with more facility, the surface of the rods should be slightly smeared with oil or grease, and a small hole should be formed through the rods or moulds from end to end, to allow of the escape of the air 25 when the mould is immersed in the material. The improved capsules may be formed of gelatine, starch, or any other material which may be deemed suitable to the purpose for which the capsules may be destined, but when intended for envelopes of medicines the Inventor recommends, in lieu of ordinary gelatine, to form them of a vegetable substance called “Carragheen Moss,” or fucus 30 crispus. It is a species of marine moss, which, when mixed with ten times its weight of boiling water, is reduced to a kind of vegetable gelatine somewhat analagous to animal gelatine. This new gelatine may be applied to the construction of the improved capsules in the same manner as the ordinary gelatine, but it has the advantage of being more soluble in the stomach, 35 wherein it becomes more easily decomposed. It is also less penetrable and permeable, which therefore renders it applicable for envelopes of every description for the purpose of preserving substances from the air, whatever be the form of the envelope or the method of making it.

Murdoch's Improved Capsule for Protecting Matters from the Action of the Air.

With the Carragheen moss dissolved in water may be mixed a portion of animal gelatine, syrups, perfumes, spices, coloring matter, and various other substances, according to the purposes for which the capsules are intended. The vegetable gelatine may be formed into leaves of any desired thickness, or
 5 cast in blocks of any form, so as to be stored in a compact state for use, taking care that the plates or moulds employed for the purpose are well polished, and that the surfaces are geared, to prevent adhesion of the gelatine.

Having thus described the nature of the Invention, and the manner of
 10 carrying the same into effect, I claim, in respect thereof,—

Firstly, the construction of capsules or small cases for protecting matters contained therein from the action of the air, by making them in two separate pieces, the one fitting tightly into the other, and forming together a kind of case and cover, such capsules being composed of gelatine, starch, or other
 15 suitable material capable of constituting a viscid solution.

Secondly, the manufacture of a vegetable gelatine from Carragheen moss, applicable to the construction of capsules of the ordinary description, and also as a gum or cement.

Lastly, the application of the vegetable gelatine herein-before mentioned
 20 to the manufacture of capsules of the improved construction herein-before described.

In witness whereof, I, the said James Murdoch, have hereunto set my hand and seal, this Second day of May, in the year of our Lord One thousand eight hundred and forty-eight.

25

JAMES (L.S.) MURDOCH.

AND BE IT REMEMBERED, that on the Second day of May, in the year of our Lord 1848, the aforesaid James Murdoch came before our said Lady the Queen in Her Chancery, and acknowledged the Specification aforesaid, and all and every thing therein contained and specified, in form
 30 above written. And also the Specification aforesaid was stamped according to the tenor of the Statute made for that purpose.

Enrolled the Second day of May, in the year of our Lord One thousand eight hundred and forty-eight.

JEFFERSON.

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